

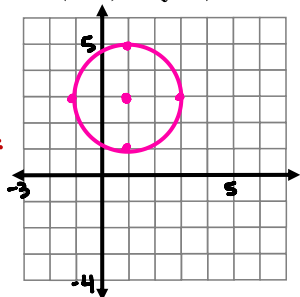
Equation of a Circle: $(x - h)^2 + (y - k)^2 = r^2$, Center = (h, k) and Radius = r

Ex 1) Graph the following circle:

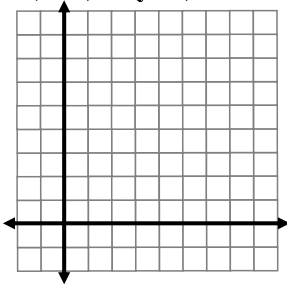
a. $(x - 1)^2 + (y - 3)^2 = 4$

Center:
(1, 3)

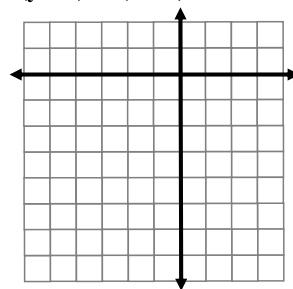
Radius:
 $\sqrt{4} = 2$



b. $(x - 4)^2 + (y - 2)^2 = 9$



c. $(y + 3)^2 + (x + 1)^2 = 16$



2) For each circle: Identify its center and radius.

Ex a. $(x + 2)^2 + (y - 5)^2 = 36$

Center: $(-2, 5)$

Radius: $\sqrt{36} = 6$

b. $x^2 + (y - 9)^2 = 18$

Center: _____

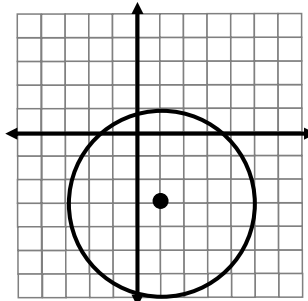
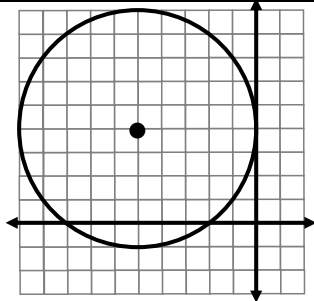
Radius: _____

c. $(y + 1)^2 + (x + 7)^2 = 24$

Center: _____

Radius: _____

3) Write the equation of the following circles:



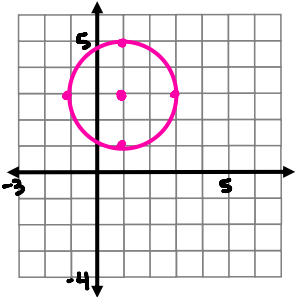
Equation of a Circle: $(x - h)^2 + (y - k)^2 = r^2$, Center = (h, k) and Radius = r

1) Graph the following circle:

a. $(x - 1)^2 + (y - 3)^2 = 4$

Center: (1,3)

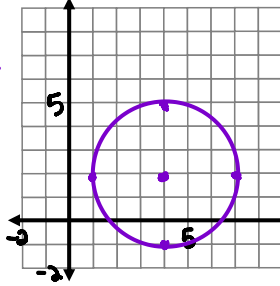
Radius: $\sqrt{4} = 2$



b. $(x - 4)^2 + (y - 2)^2 = 9$

Center: (4,2)

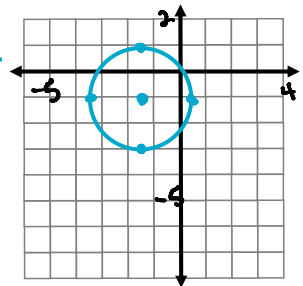
Radius: $\sqrt{9} = 3$



c. $(y + 3)^2 + (x + 1)^2 = 16$

Center: (-3,-1)

Radius: $\sqrt{16} = 4$



2) For each circle: Identify its center and radius.

a. $(x + 2)^2 + (y - 5)^2 = 36$

Center: (-2,5)

Radius: $\sqrt{36} = 6$

b. $x^2 + (y - 9)^2 = 18$

Center: (0,9)

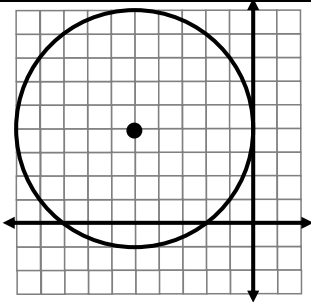
Radius: $\sqrt{18}$

c. $(y + 1)^2 + (x + 7)^2 = 24$

Center: (-7,-1)

Radius: $\sqrt{24}$

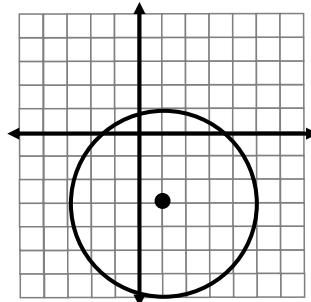
3) Write the equation of the following circles:



Center = (-5,4)

radius = 5

$$(x+5)^2 + (y-4)^2 = 25$$



Center = (1,-3)

radius = 4

$$(x-1)^2 + (y+3)^2 = 16$$